

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today
(1) was not written for publication in a law journal and
(2) is not binding precedent of the Board.

Paper No. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SANFORD B. PROVEAUX

Appeal No. 1999-2245
Application 08/705,388

ON BRIEF

Before COHEN, PATE and MCQUADE, Administrative Patent Judges.
COHEN, Administrative Patent Judge.

DECISION ON APPEAL

This appeal addresses claims 11 and 12, all of the claims
remaining in the application, which claims were entered by an
amendment (Paper No. 9) filed subsequent to the final
rejection (Paper No. 8) and replaced now canceled finally

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rejected claims 1 through 10.

Appellants' invention pertains to a seal for coaxial first and second turbine spools rotatable about an axis. A basic understanding of the invention can be derived from a reading of exemplary claim 11, a copy of which appears in the APPENDIX to the brief (Paper No. 16).

As evidence of obviousness, the examiner has applied the documents listed below:

Schweich	2,020,002	Nov. 5, 1935
Wolff	5,088,889	Feb. 18, 1992

The following rejections are before us for review.

Claims 11 and 12 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Claims 11 and 12 stand rejected under 35 U.S.C. § 103 as being unpatentable over Schweich in view of Wolff.

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The full text of the examiner's rejections and response to the argument presented by appellant appears in the answer (Paper No. 19), while the complete statement of appellant's argument can be found in the brief¹ (Paper No. 18).

OPINION

In reaching our conclusion on the issues raised in this appeal, this panel of the board has carefully considered appellant's specification and claims,² the applied references,³ and the respective viewpoints of appellant and

¹ Our reference to the "brief" is to the brief filed February 22, 1999, superseding an earlier brief filed November 30, 1998 (Paper No. 16), which earlier brief was noted as defective (Paper No. 17).

² In each of claims 11 and 12, last paragraph, the inconsistent terms "liquid" and "said fluid" denote a minor informality deserving of correction during any further prosecution before the examiner.

³ In our evaluation of the applied patents, we have considered all of the disclosure of each document for what it would have fairly taught one of ordinary skill in the art. See In re Boe, 355 F.2d 961, 965, 148 USPQ 507, 510 (CCPA 1966). Additionally, this panel of the board has taken into account not only the specific teachings, but also the inferences which one skilled in the art would reasonably have been expected to draw from the disclosure. See In re Preda,

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the examiner. As a consequence of our review, we make the determinations which follow.

The indefiniteness issue

We reverse the rejection of claims 11 and 12 under 35 U.S.C. § 112, second paragraph, as being indefinite.

The examiner has focused upon three aspects of alleged indefiniteness (answer, pages 4 through 6), which we address below.

As perceived by the examiner, it is uncertain whether appellant is claiming the subcombination of a seal per se or a seal in combination with first and second spools. We certainly appreciate that the character of the preambles and body of each of claims 11 and 12 may offer some initial difficulty in discerning the scope of these claims. Appellant views the preamble as limiting the claimed seal to a

401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

particular environment and disagrees with the examiner's indication that the preamble merely addresses an intended use, submitting that the claimed seal comprises a flange "attached" to one of the spools within a turbine (brief, page 4). From our perspective, when each of the claims is viewed as a whole, i.e., the language of the preamble and body are considered together, it is clear to us that each of these claims is definite in being drawn to a seal structurally connected to coaxial first and second turbine spools that are rotatable about an axis (combination). Our opinion in this matter appears to us to be consistent with the view of appellant, discussed above, to the effect that a seal per se is not being claimed.

The examiner views the term "canted" in claims 11 and 12 as vague and indefinite. We disagree. On pages 3 (line 28) and 4 (line 19) of the underlying specification, we are informed that the catch surface is "canted." The word "canted" is fairly assessed as denoting an oblique, slanted or

angled orientation of a surface.⁴ We observe that the specification (page 6, line 26) describes the catch surface 54 as being disposed at an angle 59, as clearly depicted in Fig.

2. In light of the above, we cannot support the view that the term "canted" is vague and indefinite in the ordinary context in which it is used in claims 11 and 12.

It is also the examiner's opinion that the use of the term "or" is vague and indefinite. However, we are not in accord with this perception. In particular, we find that the term "or" is used in an understandable fashion in claim 11 to simply denote alternative attachments for the baffle as well as alternative positioning of the baffle end surface. As such, we conclude that the term "or", as used, is definite in meaning.

The obviousness issue

This panel of the board reverses the rejection of claims 11 and 12 under 35 U.S.C. § 103 as being unpatentable over

⁴ Webster's New Collegiate Dictionary, G. & C. Merriam Company, Springfield, Massachusetts, 1979.

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Schweich in view of Wolff.

Each of claims 11 and 12 require, inter alia, a plurality of blades, extending out from and circumferentially distributed around, a catch surface, which catch surface is canted from the axis about which first and second turbine spools are rotatable.

We are informed by the specification (pages 7 and 8) that

the blades 66 serve as an impeller urging air flow and oil in the direction toward the bearing compartment 30, away from the oil seal 34, 36. The blades 66 also accelerate any air in close proximity to the blades 66 in a circumferential direction. As a result, any oil that may be entrained within the air is subject to centrifugal forces and therefore separation from the air.

We turn now to the evidence of obviousness.

The patent to Schweich (Fig. 1) addresses a packing between two rotatable members in an automatic slipping clutch

coupling. As can readily be discerned from the document (page 2, col. 1, lines 33 through 49 and col. 2, lines 27 through 36), a chamber 17 is within a casing member 3, with the inner surface of the chamber being conical. The chamber is divided into two compartments by radial disks 19, 20, and 21 secured to member 10 mounted on hub 1 of the driving member 2. Blades 18 are situated between the disks 19, 20, and 21. Centrifugal force is transmitted by the blades 18 to material (liquid) contained in the chamber 17 and tends to throw the material radially outwards upon rotation of driving member 2 against the conical inner surface. Due to the conical shape of the surface the material is caused to slide along same under the action of the centrifugal force and return to a chamber 4 via passages 11.

The Wolff patent teaches (col. 1, lines 8 through 43 and col. 2, lines 29 through 42) a seal between the rotor and stator of a flow machine (an axial flow turbine) to separate two chambers of varying pressure in the axial direction of the rotor. As shown in Figs. 1a and 1b, auxiliary blades 4 are

arranged between sealing points 2 of the rotor 3. The stated objective of the blades between the sealing points is to induce turbulent flow and swirling in the chamber between the sealing points. As further explained by the patentee, auxiliary blades can be mounted not only at the rotating component but also at the stator with respect to the chamber.

We, of course, fully comprehend the examiner's view of the references and the rationale for combining same as explained in the answer (pages 5 through 7). In particular, we appreciate that, broadly akin to appellant's seal, the overall packing of Schweich relies upon an angled or canted surface, blades, and the action of centrifugal force. However, when we set aside in our minds what appellant has specifically disclosed in the present application, and consider only the collective teachings of Schweich and Wolff, it becomes apparent to us that only impermissible hindsight would have enabled one having ordinary skill in the art to effect the claimed invention based upon the aforesaid prior art teachings. More specifically, it is our opinion that the evidence of obviousness before us simply would not have been

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suggestive of a plurality of blades extending out from and circumferentially distributed around a canted catch surface in a seal between first and second rotatable turbine spools, as now claimed. Only appellant teaches and suggests the cooperative structural connection of a plurality of blades with a canted catch surface. It is for this reason that the rejection under 35 U.S.C. § 103 is reversed.

In summary, this panel of the board has:

reversed the rejection of claims 11 and 12 under 35 U.S.C.

§ 112, second paragraph, as being indefinite; and

reversed the rejection of claims 11 and 12 under 35 U.S.C.

§ 103 as being unpatentable over Schweich in view of Wolff.

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The decision of the examiner is reversed.

REVERSED

IRWIN CHARLES COHEN)	
Administrative Patent Judge)	
)	
)	BOARD OF PATENT
WILLIAM F. PATE III)	
Administrative Patent Judge)	APPEALS AND
)	
)	INTERFERENCES
)	
JOHN P. MCQUADE)	
Administrative Patent Judge)	

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